



# TECHNICAL BULLETIN

December 4, 2020  
Supersedes June 22, 2020

---

## Agency Approved Active Ingredients for Growers

The intent of this technical bulletin is to release a list of Agency approved active ingredients that can be used in the cultivation of marijuana.

### Rule 6(3) in the Marihuana Operations Rule Set - R 420.206(3)

The agency shall publish a list of approved chemical residue active ingredients for cultivators to use in the cultivation and production of marihuana plants and marihuana products to be sold or transferred in accordance with the acts or these rules.

Use of banned chemicals will be referred to the Marijuana Regulatory Agency (MRA) Field Operations Section for investigation and inspection. This may result in sanctions, including, but not limited to, license denial; license limitation or restriction; fines; revocation, suspension, or nonrenewal of a license; administrative holds; and/or orders to cease operations. The department may issue future lists that supersede the information contained in this bulletin.

**Please note:** The Natural Resources and Environmental Protection Act, 1994 PA 451, Part 83 et seq. and Michigan Department of Agriculture & Rural Development (MDARD) regulations apply to all pesticide use; marijuana is no exception. Specifically:

- Any pesticide or pest control companies, contracted or used by marijuana facilities to apply pesticides, shall obtain a commercial applicator license through MDARD.
- If a product has a label, applicators shall fully adhere to the label. This includes when using pesticide products in marijuana cultivation, applicators must not use a rate that is higher than the rates listed on the label.

For questions related to pesticide application and labeling, please contact MDARD at 517-284-5655.

The following approved chemical active ingredients are organized by the intended target:

- <sup>B</sup> **Bactericide**
- <sup>F</sup> **Fungicide**
- <sup>H</sup> **Herbicide**
- <sup>I</sup> **Insecticide**
- <sup>M</sup> **Miticide**
- <sup>R</sup> **Rodenticide**

*This technical bulletin does not constitute legal advice and is subject to change. It is intended to provide a technical clarification only to the Marijuana Regulatory Agency's Administrative Rules. Licensees are encouraged to seek legal counsel to ensure their operations comply with the Administrative Rules.*

More information on the MRA can be found at the agency's [website](#)



# TECHNICAL BULLETIN

December 4, 2020  
Supersedes June 22, 2020

Ammonium salts  
Ammonium nonanoate (BioSafe Weed and Grass Killer<sup>\*, H</sup>)  
Azadirachtin (AzaMax<sup>\*, I, M</sup>)  
*Bacillus amyloliquefaciens* strain D747 (Ethos XB<sup>\*, F, I</sup>)  
*Bacillus pumilus* strain GHA 180 (Sonata<sup>\*, F</sup>)  
*Bacillus subtilis* GB03 (Champion Max<sup>\*, F, B</sup>)  
*Bacillus subtilis* QST strain 713 (Cease<sup>\*, F</sup>)  
*Bacillus thuringiensis* (BT Now<sup>\*, I</sup>)  
*Bacillus thuringiensis* subsp. *kurstaki* (DiPel ES<sup>\*, I</sup>)  
*Bacillus thuringiensis* subsp. *israelensis* (Teknar CG<sup>\*, I</sup>)  
*Beauveria bassiana* (Mycotrol WPO<sup>\*, I</sup>)  
*Beauveria bassiana* strain ANT-03 (BioCeres WP<sup>\*, I</sup>)  
*Beauveria bassiana* strain GHA (BotaniGard 22WP<sup>\*, I</sup>)  
*Burkholderia* spp. strain A396 (Venerate XC<sup>\*</sup>)  
Capric acid (Homeplate<sup>\*, H</sup>)  
Caprylic acid (Homeplate<sup>\*, H</sup>)  
Capsaicin (Miller Hot Sauce Animal Repellent<sup>\*, I, R</sup>)  
Capsicum oleoresin  
Castor oil  
*Chromobacterium* sub strain PRAA4-1 cells (Grandevo WDG<sup>\*, I, M</sup>)  
*Chromobacterium substsugae* (Grandevo WDG<sup>\*, I, M</sup>)  
Cinnamon and cinnamon oil  
Citric acid  
Cloves and clove oil (Ex-icute<sup>\*, I</sup>)  
*Coniothyrium minitans* (as a soil amendment, ConTans WG<sup>\*, F</sup>)  
Copper hydroxide (Badge SC<sup>\*, B, F</sup>)  
Copper octanoate (Cueva<sup>\*, F</sup>)

Copper oxychloride (Badge SC<sup>\*, B, F</sup>)  
Corn oil  
Cottonseed oil  
Ethanol  
Eugenol  
Farnesol (Biomite<sup>\*, I</sup>)  
Fenhexamid (Elevate 50 WDG<sup>\*, F</sup>)  
Garlic and garlic oil (Captiva<sup>\*, I</sup>)  
Geraniol (Biomite<sup>\*, I</sup>)  
*Gliocladium catenulatum* Strain J1446 (LALSTOP G46 WG<sup>\*, F</sup>)  
*Gliocladium virens* (SoilGard 12G<sup>\*, F</sup>)  
*Heterohaditis bacteriophora* (NemaSeek-Hb Beneficial Nematodes<sup>\*, I</sup>)  
*Heterohaditis indica* (NemaSeek-Hi Beneficial Nematodes<sup>\*, I</sup>)  
Horticultural oils (petroleum oil)  
Hydrogen Peroxide (OxiPhos<sup>\*, B, F</sup>)  
Insecticidal soaps (potassium salts of fatty acids)  
Iodine (10% Povidone - Iodine)  
Isopropyl Alcohol  
*Isaria fumosorosea*  
Linseed oil  
Milk  
Mineral Oil (Suff-oil X<sup>\*</sup>)  
Mono and di-potassium salts of phosphorous acid (Appear<sup>\*, F</sup>)  
Neem oil (Trilogy<sup>\*, F, I, M</sup>)  
Nerolidol (Biomite<sup>\*, I</sup>)  
*Paecilomyces fumosoroseus* (PFR-97 20% WDG<sup>\*, I</sup>)  
Paraffinic oil (mineral oil, 415 Superior Spray Oil<sup>\*, F, I, M</sup>)  
Peppermint and peppermint oil (Mantis EC<sup>\*, I</sup>)  
Peroxyacetic acid  
Piperonyl butoxide

*This technical bulletin does not constitute legal advice and is subject to change. It is intended to provide a technical clarification only to the Marijuana Regulatory Agency's Administrative Rules. Licensees are encouraged to seek legal counsel to ensure their operations comply with the Administrative Rules.*



# TECHNICAL BULLETIN

December 4, 2020  
Supersedes June 22, 2020

---

Potassium bicarbonate (Kaligreen*, F)	<i>Stienrnema riobrave</i> (NemaAttack-Sr
Potassium silicate (Sil-Matrix LC*, F, I, M)	Beneficial Nematodes*, I)
Potassium sorbate	<i>Streptomyces lydicus</i> wyec 108 (Actinovate
<i>Reynoutria sachalinensis</i> (Regalia*)	AG*, F)
Rosemary and Rosemary oil (Mantis EC*, I)	Sucrose octanoate
Sesame and sesame oil (Ex-icute*, I)	Sucrose octanoate esters
Sodium dicarbonate	Sulfur (Cosavet DF*, F, I, M)
Sodium benzonate	Thyme and thyme oil (Proverde*, I)
Sodium carbonate peroxyhydrate	<i>Trichoderma asperellum</i> strain ICC 012
Sodium citrate	(Tenet WP*, F)
Sodium chloride	<i>Trichoderma gamsii</i> strain ICC 080 (Tenet
Sodium hypochlorite	WP*, F)
Sodium lauryl sulfate (Green Cleaner*)	<i>Trichoderma harzianum</i> Rifai strain T-22
Soybean oil (Mantis EC*, I)	(RootShield*, F)
<i>Stienernema carpcapsae</i> (NemaAttack-Sc	<i>Trichoderma harzianum</i> Rifai strain KRL-
Beneficial Nematodes*, I)	AG2 (Trianum-G*, F)
<i>Stienernema feltiae</i> (NemaAttack-Sf	White pepper
Beneficial Nematodes*, I)	Yeast (not active - often, dead yeast is
<i>Stienrnema kraussei</i> (NemaAttack-Sk	added as an ingredient in commonly used
Beneficial Nematodes*, I)	name brands)

***\*Mention of trade names or commercial products in this bulletin is solely for the purpose of providing information and does not imply recommendations or endorsement by the MRA. There may be additional products which include this active ingredient, brand name provided as an example.***

*This technical bulletin does not constitute legal advice and is subject to change. It is intended to provide a technical clarification only to the Marijuana Regulatory Agency's Administrative Rules. Licensees are encouraged to seek legal counsel to ensure their operations comply with the Administrative Rules.*

More information on the MRA can be found at the agency's [website](#)